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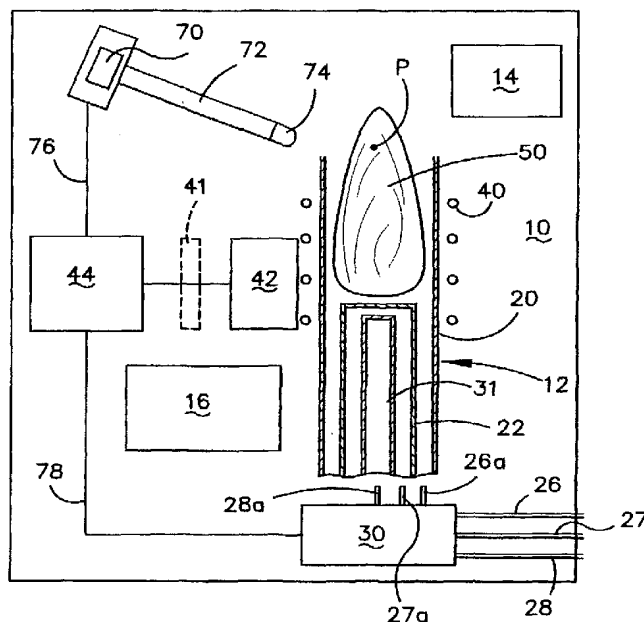
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- (71) Applicant (for all designated States except US): **GBC SCIENTIFIC EQUIPMENT PTY LTD** [AU/AU]; 12 Monterey Road, Dandenong, VIC 3175 (AU).
- (72) Inventor; and (75) Inventor/Applicant (for US only): **CONDICK, Geoffrey, Mark** [AU/AU]; 3 Chandos Place, Langwarrin, VIC 3910 (AU).
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(54) Title: PLASMA TORCH SPECTROMETER



(57) Abstract: A spectrometer is disclosed which comprises a plasma torch (12) and an induction coil (40) for generating a normal plasma (P) within the torch. The torch (12) has an outer tube (20) and an inner tube (22). If the plasma (50) collapses from a normal plasma state to a toroidal or faulty plasma shape (52), a photodiode (70) detects the change in shape so that the plasma torch can be shut down to prevent the plasma shape (52) from melting the tube (20) of the torch.

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